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THE ROLE OF NUCLEAR ARTILLERY IN THE DEFENSE OF WESTERN EUROPE:--ETC(U)
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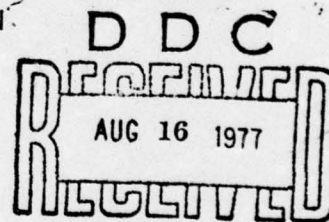
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THE ROLE OF NUCLEAR ARTILLERY IN THE DEFENSE OF
WESTERN EUROPE: A SURVEY OF THEATER NUCLEAR
FORCE POSTURE AND EMPLOYMENT DOCTRINE

By

LIEUTENANT COLONEL ROBERT E. ROGAN
INFANTRY



US ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013

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USAWC MILITARY RESEARCH PROGRAM PAPER

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FORCE POSTURE AND EMPLOYMENT DOCTRINE

AN INDIVIDUAL RESEARCH PROJECT

by

Lieutenant Colonel Robert E. Rogan, Infantry

US Army War College

Carlisle Barracks, Pennsylvania

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ABSTRACT

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I. INTRODUCTION

Over two decades ago the United States introduced tactical nuclear weapons into Western Europe. During the ensuing years, the strategic and tactical nuclear monopoly enjoyed by the United States vanished. US participation in the Strategic Arms Limitations Talks (SALT) affirmed that fact; it represented de facto US recognition of the Soviet Union as a co-equal in strategic nuclear power. An equally dramatic shift in the nuclear power balance in Europe was brought about by Soviet attainment of a tactical nuclear arsenal adequate to insure that any use of tactical nuclear weapons by NATO could evolve into a two-way nuclear conflict.¹ Thus, the shift from US nuclear supremacy to a condition of rough equivalency, which evolved from a continuously improving Soviet nuclear posture, both tactical and strategic, warrants reassessment of NATO's strategy for the defense of Western Europe and the role which US nuclear weapons are to play in that strategy.

In an era characterized by apparent Soviet conventional superiority, increased Soviet tactical nuclear capability and strategic nuclear parity, one must question whether the existing NATO strategy, which relies upon the use of tactical nuclear weapons to successfully defend Western Europe and upon coupling to the US strategic nuclear forces to deter aggression, remains appropriate. If the NATO strategy of nuclear deterrence and defense is to remain viable and credible, it is apparent that nuclear defense requires the maintenance of an adequate theater nuclear force (TNF) and the existence of a credible

doctrine for the employment of the TNF. Specific roles and missions must be assigned to the TNF. Has this been accomplished?

The role of the NATO general-purpose, conventional forces is clearly understood; so, too, are the roles and missions of the US strategic forces in a conflict in Europe. However, if deterrence fails, conflict in Europe carries with it the immediate potential for escalation to theater nuclear war and the doctrine for employing the TNF in such a conflict is not so well defined, not so clearly understood. Yet it is in the crossing of the nuclear threshold that the greatest danger of immediate, uncontrolled escalation exists. It is also in the cautious bridging of the gap from conventional to nuclear warfare, hopefully limited to the local battle area, that the shorter range theater nuclear artillery (TNA) will play a singular role. Therefore, it is my purpose to examine the role of the TNF/TNA in supporting US/NATO interests and objectives in Western Europe and to evaluate the current doctrine for conducting a tactical nuclear defense in Western Europe.

II. BACKGROUND

A. GENERAL.

Discussion of current nuclear force posture and nuclear employment doctrine for NATO and Western Europe would be, at the very least, academically insufficient if it did not address those political and strategic considerations which influenced the evolution of NATO strategy. Therefore, it is appropriate to present in thumbnail sketch the rationale for stationing US forces and nuclear weapons

in Europe, the nuclear competition with the Soviet Union in Europe, NATO's current posture, and the apparent result of US commitment of nuclear weapons to NATO thus far. With those considerations "in mind," I will address the role of the TNF/TNA in the present environment and assess our current nuclear doctrine as it has evolved over two decades.

B. US INTEREST IN WESTERN EUROPE.

Unless one is willing to assume at the outset that the presence of US forces and nuclear weapons in Western Europe is good, and there is a significant body of thought that is not so inclined, a discussion of US interests in Western Europe is worthwhile. However, since it is not my purpose to rejustify US presence but rather to discuss roles and doctrines for forces there present, I shall simply present several views on the nature of US interest in Western Europe and the perceived effect of US withdrawal from Europe.

General George S. Brown, Chairman of the Joint Chiefs of Staff, noted in his appraisal of the European theater that:

The strategic importance of Western Europe to the security of the United States remains second only to that of the territorial United States itself. It is a critical area of the world in which fundamental U.S. interests may be tested by the Soviet Union. It is a major arena in which weapon systems and forces of the United States and the Soviet Union immediately face each other.²

Wynfred Joshua addressed the issue of US interests in Europe from a different view in "Nuclear Weapons and the Atlantic Alliance":

From the vantage point of US interests, the value of the Western Alliance is surely obvious. Without

the protection that the Alliance provides against the threat of Soviet aggression and Soviet pressure, an increasingly fractionalized Western Europe would drift toward neutralization. The West European nations would no longer have the will to determine their own course in diplomacy or even ideology, and could easily reach the stage that has been popularized by the term Finlandization. The demise of a free Western Europe would drastically reduce and eventually virtually destroy the US strategic position throughout the world. This development would also spell the end of Europe as the principal world market for US industry and of some \$30 billion of US industrial investments in Europe.³

And the view of the Federal Republic of Germany (FRG) concerning the maintenance of military balance and deterrence along its national borders is noteworthy. In the annual "White Paper" published by the Ministry of Defense, addressing the security of the FRG, the following appeared:

The balance of military forces between West and East remains indispensable if there is to be a stable international order.⁴

Each of the two world powers regards the territory of its alliances as spheres of interest upon which the other may not encroach with military force. This is why Europe, the area in which the direct confrontation of power politics is taking place, is a relatively stable region. . . . both are interested in avoiding any military conflict in Europe, for such a conflict, from the very outset, harbours the danger of world-wide escalation.⁵

Clearly it is the view of a distinguished soldier, a distinguished military/political analyst and an allied government that US security and economic interests, and those of the Western World, are common interests and that they are best served by guaranteeing the security and autonomy of our Western European allies. I support that view. Therefore, I shall proceed with the

view that US interests are served by providing its fair share to the NATO defense of Western Europe. Later, I shall address the "how" of meeting this commitment.

C. THE EVOLUTION OF NATO NUCLEAR STRATEGY.

Since the establishment of NATO in 1949, evolution of the basic strategy for the alliance can be described with three distinct phases or strategies. The first strategy called for the development of a conventional force structure adequate to match the USSR and its allies. This strategy proved to exceed the capability of the Alliance to support economically.⁶ Therefore, a new strategy evolved which was based upon the so-called "trip-wire" concept and the "threat of massive retaliation with nuclear weapons in lieu of large conventional forces."⁷

The "trip-wire" strategy, defined in NATO Military Committee Document (MC) MC14/2, was adopted during a period when the overwhelming superiority of the US nuclear forces went unchallenged. Although the strategy appeared to deter Soviet aggression during the period of its implementation, two inherent limitations of the strategy destined it to be short-lived. The first of these limitations was that it made no provision for handling threats of aggression and conflict at lower levels than major US/USSR conflict. The second limitation was that it presumed US nuclear superiority. As the Soviets developed their nuclear capability, both strategic and tactical, it became patently clear that the NATO strategy of deterrence through threat of massive retaliation had suffered a loss of

credibility, if not effectiveness. A strong body of thought reasoned that in much the same way as our nuclear umbrella had deterred Soviet conventional aggression in Western Europe in the earlier period, so might the threat of Soviet "massive nuclear response" deter the use of US strategic nuclear weapons except in response to a nuclear attack on the United States or her allies. Therefore, the worth of a strategy which sought to deter conventional aggression through threat of massive strategic nuclear response was challenged.

In 1967, NATO adopted the strategy of "flexible response," which, as defined in MC14/3, called for:

. . . conventional and nuclear forces, doctrine and planning which can accomplish the following objectives:

- To deter WP aggression.
- If deterrence fails, to defeat aggression at any level of attack (conventional or nuclear) made by the enemy.
- If direct defense fails, to use deliberately increased military force as necessary to make the cost and risk disproportionate to the enemy's objectives and cause him to cease his aggression and withdraw.
- In the event of general nuclear war, to inflict extensive damage on the Soviet Union and other WP countries. This objective would be accomplished in conjunction with the strategic forces of the NATO nuclear powers.⁸

In essence, the strategy of "flexible response" was "designed to meet with like force, the full range of possible Soviet/Warsaw Pact military threats."⁹ Seemingly NATO had adopted a "strategy for all seasons" and one which did not commit the civilized world to a thermonuclear holocaust at the slightest provocation.

Since the adoption of MC14/3, several major changes in the strategic environment have occurred which warrant consideration. Among those changes are the recognition of strategic parity between the US and the USSR, as acknowledged in SALT, detente, improved prospects for meaningful negotiation between major powers and advanced technology with its attendant modification of doctrine. Notwithstanding that those changes have influenced a shift in doctrine and thinking among the NATO allies, including a doctrinal shift from unconstrained use of nuclear weapons on the battlefield, to accommodate changing conditions, force modernization and evolving strategy, flexible response strategy remains "a sound basic approach to NATO defense planning in the 1970's."¹⁰

There are those, however, who challenge the implementation of this strategy, if not the strategy itself. Among them, Dr. Morton Halperin, in his article, "30,000 U.S. Nuclear Weapons," The Defense Monitor, February 1975, expressed the view that:

The NATO doctrine is that we will fight with conventional forces until we are losing, then we will fight with tactical nuclear weapons until we are losing, and then we will blow up the world.¹¹

Unfortunately, his implied view of the shortcomings of NATO strategy is not without basis in fact. How do the NATO allies structure their strategy and forces to assure the highest probability of success of deterrence? If deterrence fails, how does NATO conduct the war to defend successfully against aggression while simultaneously minimizing the probability of escalation to theater-wide nuclear conflict or strategic nuclear exchange? These are the questions

to be addressed in assessing the role of the TNF/TNA.

D. CURRENT POSTURE OF OPPOSING THEATER NUCLEAR FORCES.

As noted earlier, the Warsaw Pact now enjoys possession of a tactical nuclear arsenal adequate to insure that a theater nuclear war would not be one-sided. It is significant to note, however, that subtle differences do exist between those forces presently deployed, and it is meaningful to highlight differences in capabilities.

NATO TNF: The US is assessed to have some 7,000 nuclear warheads deployed to support theater nuclear forces.¹² NATO's TNF is equipped with battlefield support systems such as nuclear capable tube artillery, short-range surface-to-surface missiles and atomic demolition munitions, a substantial number of surface-to-air missiles, aircraft-delivered nuclear bombs and a slice of the submarine-launched ballistic missiles. Yields for weapons systems vary but are generally in the low kiloton range.¹³ However, despite the impressive numbers of weapons deployed to support the TNF, serious limitations in current force posture demand attention. A considerable portion of the TNF stockpile are bombs to be delivered by tactical aircraft launched from airfields within theater. In arguing their utility and survivability, Mr. Alain Enthoven noted that they "became an anachronism more than ten years ago when the Soviets deployed more than enough IRBM's and MRBM's in the western USSR to destroy each of the airfields several times over."¹⁴ Considering that the theater-based aircraft represent the only

land-based TNF capable of striking the Soviet Union, the logic of Mr. Enthoven's statement is not without merit since one might expect Soviet targeting procedures to place priority on such targets within Western Europe. It is also noteworthy that a significant portion of the TNF stockpile represents "first generation" systems which do not provide state-of-the-art weapon capabilities to NATO. Finally, like our aircraft, our surface-to-surface missiles, save the Lance, are more movable than mobile, vulnerable to WP pre-emptive strike and therefore, of questionable survivability during a dedicated WP assault on NATO nuclear delivery means in the early hours of a conflict.¹⁵ Summing then, while numbers and types of nuclear weapons are at least adequate, survivability is uncertain!

Warsaw Pact TNF: The Warsaw Pact is assessed as having about 3,500 warheads¹⁶ designated for support of a theater nuclear war. Soviet warheads are generally deliverable by aircraft and missile.

Soviet warheads are thought to be somewhat larger, on the average, than those of NATO and the delivery systems, both ground and air, notably less accurate. Soviet doctrine has concerned itself more with area targets than with precision. . . .¹⁷

Comparison of Forces: An assessment of the military balance of TNF gives to the Soviet the capability to launch a massive theater nuclear offensive or to match NATO escalation with roughly equivalent options. However, an imbalance in theater nuclear capability still favors NATO. General Alexander Haig, Jr., Supreme Allied Commander Europe (SACEUR), affirmed this view in June 1976.

In the "battlefield" or theater nuclear area, the West still enjoys both qualitative and quantitative superiority, although here, too, the trends are highly dynamic. One sees major Soviet efforts to improve their delivery means, as witnessed by a thickening of nuclear capable rocket artillery, and the possibility of a tube artillery nuclear capability.¹⁸

One year later, Secretary of Defense Rumsfeld noted in his Annual Defense Department Report, FY 1978, that while the Soviets enjoy the option of limiting a theater war in Europe to a purely conventional aggression at the outset, they continue to articulate a doctrine which calls for early use of nuclear weapons in a European war and "they are not at any disadvantage where theater nuclear forces are concerned."¹⁹

Other Nuclear Forces: A discussion of nuclear war-fighting capability in Europe is less than complete if it does not consider the long-standing nuclear capabilities of the French and British. Unlike the Soviet, who retain absolute control of all nuclear capability within the Warsaw Pact, NATO and the US do not absolutely control the nuclear forces of the British and the French, despite the Alliance. Indeed, "neither we nor the Soviets are necessarily the sole judges of where, when, and how such weapons [nuclear weapons] might be used."²⁰ These national nuclear forces are estimated to include a small number of French IRBM/SRBM (42), an SLBM force of approximately 128 missiles equally divided between Britain and France, and an unknown number of air-delivered nuclear bombs.²¹ It is noteworthy that these forces have the capability

of striking at the "homeland" of the USSR. Clearly, a new dimension of concern in arms control and conflict escalation now exists.

III. DETERRENCE

Deterrence, the act of preventing war, is the primary objective of NATO. The first stated objective of the conventional and nuclear forces is "to deter Warsaw Pact aggression."²² NATO's predilection for deterrence is clearly understood. On the international scene, conflict in Europe carries with it the potential for worldwide conflict. However, the NATO allies must concern themselves with the effects of a war in which at least the initial battlefield will be the homeland. "They care little for having to fight a war, long or short. Their concern is to make deterrence as strong as possible; . . ."²³ How is this goal to be accomplished? What kind of doctrine is best suited to the task? What force structure is required? These are the questions which must be addressed in a meaningful discussion of deterrence.

Deterrence is a product of "how an adversary views the military potential of your force and your willingness to use that force."²⁴ The inference is two-fold. First, a successful deterrent posture must include a military posture which the adversary will perceive as adequate to cause the cost of conflict to be disproportionate to the objectives sought. Second, such a perception of military capability is meaningless if the adversary perceives a lack of resolve to use that capability. Therefore, effective deterrence in NATO must

combine military capability, resolve, and the doctrine to employ that military capability if deterrence fails.

Accepting that the theme of the NATO strategy of "flexible response" is to provide deterrence, and defense if needed, in the face of Warsaw Pact conventional superiority, I will omit discussion of the conventional force inferiority, an essay unto itself, presume a need for some complementary force in light of conventional inferiority, and pass on to the TNF.

Perhaps the best introduction to the discussion of NATO TNF and its role in deterrence is to quote from Secretary of Defense Schlesinger in his report to the Congress in 1975:

While arguments can be made against the deployment of nuclear weapons in Europe, the United States and its NATO Allies continue to hold that such deployments are an essential part of a credible NATO military posture.

The most important reason for this conclusion is that US nuclear weapons in Europe are a visible symbol to Allies and adversaries of the US commitment to provide for Europe's nuclear defense. Deterrence is enhanced by the presence of these weapons. . . .

US nuclear weapons in Europe for allied delivery vehicles increase NATO cohesiveness by allowing the Allies to share the risks and responsibilities of Europe's nuclear deterrent.²⁵

Jeffrey Record, of the Brookings Institute, expanded on that theme by noting that the mere presence of US nuclear weapons in NATO, coupled with an apparent "deliberately ambiguous" employment doctrine, imposed a greater degree of tactical uncertainty on the Soviet and Warsaw Pact planners than might otherwise be the case.²⁶ No Soviet planner would dare to ignore the danger of nuclear counter-attack. Therefore, attack formations must, of necessity,

be dispersed to the degree necessary to avoid presenting lucrative nuclear targets and this dispersion constrains the attackers' ability to mass forces to gain the conventional force superiority required to overcome the defender. Clearly, the presence of the TNF benefits the inferior NATO conventional forces. It would seem, therefore, that the presence of NATO TNF strengthens deterrence by contributing to the solidarity of NATO, by demonstrating the resolve of the US to meet its commitment to the nuclear defense of NATO, by improving NATO's defensive force posture by compensating for conventional inferiority, and by presenting cost/risk uncertainties to the Warsaw Pact in planning an attack on Western Europe.

To imply that "all is good" in the stationing of US nuclear weapons in NATO is to fail to acknowledge several disadvantages accruing from their presence which are worthy of note. First is the increased vulnerability of US nuclear forces to a Soviet first-strike. However, I believe a reasonable argument can be presented that the requirements of operational readiness outweigh this disadvantage and that selected actions can be taken to minimize vulnerability to the extent necessary to obviate a need to remove nuclear weapons from the theater to assure their survival. Second is the so-called potential for excessive NATO reliance upon nuclear weapons to the extent that their presence serves to deemphasize the need to improve NATO's conventional forces. The counter to that perceived, and I believe real, disadvantage is to assure that the NATO allies clearly understand the necessity to maintain adequate, complementary nuclear and conventional forces. Deficiencies in

either part of the force weaken the deterrent value of the total force. To be sure, nuclear weapons cannot be viewed as the only means required to successfully defend Europe. I am confident that the capability to "fight the battle" is a necessary element of a meaningful strategy to deter the battle! Finally, although the presence of the TNF presents tactical uncertainty to the Soviet planner and may well deter conventional aggression, it has been theorized that "it is perhaps equally likely that in an acute crisis it would serve to reduce the prospect of nonnuclear conflict by encouraging a preemptive Pact nuclear strike."²⁷ Such theory is supported by declared Soviet doctrine of intent to strike preemptorily if a NATO nuclear strike is imminent. Therefore, NATO's declared doctrine must make it clear that the presence of TNF is defensive in nature, that it will be employed as required, and that NATO possesses the capability to survive a preemptive strike by the Warsaw Pact with a "second-strike" capability intact. Beyond that, the uncertainties of use/counter-use by either side must be the subject of continuous evaluation in the context of current force postures. Notwithstanding the latter theory, it is my view that the advantages of the presence of TNF in Western Europe far outweigh any real or perceived disadvantages. In that mindset, the next issue is how to structure the TNF to enhance deterrence.

In arriving at the best TNF posture for NATO, one ought to consider a number of influencing factors. Among these are: (1) strategic parity and its effect on deterrence by threat of escalation; (2) deterrence and "detente"; (3) TNF posture and political

constraints; and (4) the essential military characteristics of a credible deterrent force posture. Each contributes in a unique way to the determination of the character of the force which should be deployed to deter conflict in Western Europe.

US/Soviet strategic parity has unquestionably lessened US enthusiasm for deterrence through threat of "massive retaliation." Indeed, a dilemma in NATO planning and force structuring has arisen as a result of this so-called parity. The US logically would prefer a doctrine which provides a capability to defeat aggression in-theater. On the other hand, the NATO Allies perceive a distinct advantage to early escalation to strategic exchange.²⁸ However, a popular view of parity and deterrence holds that the "threat of massive retaliation, while still credible as a deterrent threat against massive nuclear strikes on the United States, has no credibility and therefore no utility for any other purpose."²⁹ This view clearly challenges the value of a NATO deterrent strategy which emphasizes the threat of escalation to strategic exchange to deter war in Western Europe. Robert Kennedy supports this view in his essay on NATO defensive posture when he comments:

. . . in an age where each superpower is considered to have sufficient nuclear forces to sustain a nuclear first strike and then issue a devastating retaliatory response, the threat of escalation to general nuclear war appears to be a less credible basis for NATO's deterrent and defense policies than when the United States had an overwhelming superiority.³⁰

These views, which reflect a strong body of thought, lead one to challenge the credibility of a strategy of theater level nuclear

deterrence. On the other hand, given the logic which supports that parity has diminished the effectiveness of nuclear threat as a deterrent, "To base US policy on such a conclusion . . . would ignore the political derivatives of modern military capabilities."³¹ And, despite much ado about the alleged decoupling which resulted from strategic parity, there is no evidence to suggest that the Soviets view the NATO nuclear capability, tactical and strategic, as anything less than "an inseparable totality in the event of conflict."³² Therefore, one must conclude that the presence of the TNF continues to counter the Warsaw Pact conventional/nuclear threat and provides a capability to cope with a variety of hypothetical conflicts short of strategic exchange in addition to reaffirming US resolve to guarantee the defense of Western Europe. That the Allies continue to welcome the presence of the US TNF for its deterrent value as a link to the US strategic nuclear forces rather than for its potential use in a theater war which would be potentially devastating to Western Europe is understandable. Deterrence remains the primary objective of NATO and to decouple US strategic and tactical (TNF) nuclear forces would be tantamount to a public announcement that NATO defeat in a theater war in Europe would be more acceptable to the United States than involvement in a strategic exchange between the US and the Soviet. The implications of such a policy on deterrence are apparent. No meaningful strategy for the defense of Western Europe which is designed to deter aggression and, if deterrence fails, to guarantee the defense of Western Europe, is meaningful unless US nuclear forces constitute an integral part of

US capabilities.³³ Therefore, while parity has diminished the value of a pure strategy of "massive retaliation," the threat of escalation remains very much a part of a strategy of deterrence in NATO.

The major change brought about by the condition of "parity" has been a reorientation of Allied thinking about the feasibility of tactical nuclear war. In the words of Wynfred Joshua:

Strategic nuclear parity has not changed the preference of the Allies for deterrence. But the advent of parity between the superpowers has forced the NATO Allies to consider the possibility of conflicts at different levels and the relationships between such levels of conflict. . . . In short, they are coming to accept that in order to have deterrence against these various levels of aggression, a credible defense against them is needed.³⁴

Coupling to US strategic forces is no longer sufficient for deterrence. The Warsaw Pact must also perceive a threat to its forces, in terms of theater defense by NATO, that would cause an unfavorable result in the cost/risk equation independent of an assessment of whether limited aggressions would evoke a US strategic nuclear response. In that context, Joshua points out that:

Thinking in the West German military is turning grudgingly but realistically to the defense and war-fighting role of tactical nuclear weapons. German planners have urged that any major invasion would fairly quickly be met with tactical nuclear weapons as a complement to conventional firepower.³⁵

The NATO Allies now consider the possibilities of a tactical nuclear war and are developing appropriate doctrine for such an eventuality, in support of the overall objective of deterrence, with strategic coupling remaining a matter-of-fact, strategic parity notwithstanding. The international order, evolving from the very existence of

arsenals of nuclear weapons with nearly incomprehensible destructive potential discourages their abolition and "demands, as the necessary condition for avoiding nuclear war, the very preservation of these arms, always ready to destroy entire nations."³⁶ In summary, then, parity notwithstanding, NATO's Triad remains an appropriate force posture with the TNF linking the conventional and strategic forces in such a way that all three present a continuum of capabilities with which to assure Western European defense and to present to a potential aggressor grave tactical and strategic concerns, the basis of a credible deterrent posture.³⁷

If parity has seemingly indorsed the need for a credible tactical nuclear war-fighting capability for NATO, has the "era of detente" lessened the need? The question must be answered in the context of the differing US and Soviet views of detente and the overall objectives of the Soviet in Eastern Europe.

Western leaders view detente as a period of significantly improved relations between the East and the West attended by a "Mutual Interest" in continuing to improve relations. They view detente as pervasive of the spectrum of international affairs and they are cautious not to perturb detente by any move, political or military, which might be construed by the Soviet as hostile or escalatory. On the other hand, "The Soviets have shown a clearer perception of the matter than we have in the West, . . . They combine a policy of detente with a policy of continued military strength."³⁸ Neither do they seem constrained in seeking to enhance their political interests worldwide. The Soviet apparently view

detente as a period of relaxed international tension during which they intend to improve their international/strategic position at the West's expense and "there is good evidence that the Soviets want and need some of the economic and technological benefits that detente offers. Moreover, the Soviets undoubtedly see value, in this uncertain world, in avoiding the chances in costly clashes with the West where significant potential gains for themselves are not involved."³⁹ However, there is no indication that the Soviets view detente as contrary to their interests. Therefore, a noteworthy danger of detente, from a NATO point of view, is that "detente will be called upon, or relied upon, to do more than is within its power."⁴⁰ Such a real danger has been manifested by the failure of selected NATO Allies to recognize that detente has not diminished the threat, that it does not guarantee peace or nonaggression, and that detente is not justification for the relaxation of defense or unilateral moves to reduce force structures in the name of economics. As noted in the most recent "White Paper" on the security of the FRG:

In its policy of detente, NATO must not allow itself to overestimate initial successes and to derive from them--beset by economic difficulties--a justification for relaxing the defense effort. Considering the continuing armaments efforts on the part of the East, such relaxation would bring about a further shift in the conventional balance of forces in Europe in favour of the Warsaw Pact and seriously jeopardize our security.⁴¹

Every indication suggests that the Soviets have not varied from their basic objectives and strategy.

The Soviet objectives in Europe are to continue to solidify their interests in Eastern Europe and to work toward a position of

hegemony in all of Europe. Clearly, they seek "to replace the Pax Americana in Europe by the Pax Sovietica."⁴² And, despite detente, the Soviet/Warsaw Pact strategy for Europe, their military objective, continues to be to maintain strategic parity with the United States and conventional superiority over NATO.⁴³ A view that detente can be expected to produce more than it has, that is a period of relaxed international tension characterized by continued Soviet efforts to build upon existing Soviet/Warsaw Pact influence and military might, is an unwarranted view of the Soviet "modus operandi." Indeed, the obverse should be expected. Kintner et al point out in their special analysis of Soviet military trends that:

The Soviet operational code requires the party leadership to exploit opportunities for political advantage. Pre-mature risk-taking, or adventurism, is to be avoided but failure to gain from a favorable situation is a form of 'revisionism' or unnecessary accommodation to the West.⁴⁴

In that context, detente should be viewed as an exploitable opportunity; one in which the Soviet seeks to enhance their position in Europe.

The logical conclusion to be drawn is that detente has not diminished the need for NATO to maintain a credible defense posture to deter conflict and to counter apparent Warsaw Pact efforts to improve their military posture and influence in Europe. Indeed, the converse is true. "Warsaw Pact forces, both nuclear and conventional, are being steadily strengthened; their doctrine and posture continue to be offensive in character."⁴⁵ NATO must continue to upgrade its theater posture, nuclear and conventional, and continue to demonstrate

the resolve to meet aggression with a level of military force unacceptable to a potential aggressor. NATO must not relax to the extent that "a cheap victory" may be perceived by the enemy. To that end, TNF must be structured so that it is apparently capable of meeting the objectives of deterring aggression and conducting a credible nuclear defense. The power of "detente" cannot be depended upon to deter hostilities nor can an alleged "mutual US/Soviet desire for detente" be depended upon to assure stability and rationale response in times of confrontation.

Parity indorsed the need for a TNF and detente has not diminished that need. But, neither drives the force structure. The force structure of the TNF is driven by political overtones and employment constraints as well as by tactical requirements. Employment constraints, like tactical requirements, will exert a profound influence upon the exact structure of the force; type delivery systems, range, yields and numbers of warheads. Politically, we seek two objectives: (1) to affirm our resolve to meet our commitment to defend Western Europe within the NATO Alliance, and (2) to project to the adversary the potential for escalation to nuclear war which attends aggression in Western Europe. Therefore, how we structure US nuclear forces in Europe and how we modernize, upgrade or realign those forces must consider how such actions will be read by ally and adversary alike. Secretary Schlesinger made this point abundantly clear in his PL 93-365 report to the Congress:

The process whereby adjustments are made to the theater nuclear force posture is highly important.

An essential element of deterrence is the political solidarity of the NATO Alliance. The United States is consulting and will continue to consult fully with its Allies in order to strengthen NATO solidarity. If the United States were to act unilaterally and precipitously, the Alliance and its deterrent could be weakened.⁴⁶

Conversely, a coordinated effort to improve the NATO force posture, nuclear and conventional, in the face of the growing Soviet/Warsaw Pact threat to the Alliance "will demonstrate a common Alliance determination to do what is necessary to maintain an adequate defense and should help to disabuse Soviet leaders that the correlation of forces is in fact swinging in their favor."⁴⁷ Clearly, then, the structuring of the TNF must derive from political considerations and constraints or perception of the TNF may impact adversely on deterrence.

The development of the TNF employment doctrine must also be accomplished in the context of those major political considerations and constraints which influence Allied opinion. "Whatever the attractions of a particular TNW doctrine may be held to be vis-a-vis postulated external threats, the doctrine must first pass the tests of political acceptability within the Alliance."⁴⁸ In the case of the Federal Republic of Germany, a major concern is that the tactical nuclear battle not be limited to the FRG and that, to the extent possible, nuclear weapons be used early and in such a manner as to minimize damage to the FRG. It is not surprising that "the possibility of unacceptable destruction or 'collateral damage' resulting from friendly employment of tactical nuclear weapons in the defense of Western Europe is one of the underlying

considerations politically influencing West European opinion on tactical nuclear defense."⁴⁹ Therefore, political considerations can be expected to drive force structure in the direction of systems which minimize collateral damage if employed on allied territory and which permit a share of the burden of nuclear war to be carried to the non-Soviet Warsaw Pact countries. The doctrine for employing the TNF must be designed to project a credible deterrence, to be capable of early, decisive employment, and to be linked to a guarantee of "strategic back-up" while simultaneously minimizing the so-called "inevitability" of escalation. Such a force would reassure NATO, provide a credible deterrent, and promise to minimize collateral damage on allied soil as the battle is carried to the Warsaw Pact.

Having alluded to the tactical requirements or military capabilities of the TNF above, what are those desired military characteristics which should be readily detectable by the adversary and which enhance the adoption of a valid doctrine of deterrence and defense?

Clearly they are those system and force characteristics which provide the NATO Alliance a credible, war-fighting capability adequate to present a successful defense against Warsaw Pact conventional or nuclear aggression. Among those characteristics are:

SURVIVABILITY: In light of the declared Soviet doctrine to preemptorily strike NATO if a NATO nuclear strike appears imminent, the TNF must be capable of surviving a "disarming first-strike" with assured second-strike capability intact. Such survivability would serve to deter Warsaw Pact first-use and create tactical uncertainty concerning the outcome of nuclear-conventional aggression.

FLEXIBILITY: Equipping the force with the appropriate delivery means and warheads to meet a variety of postulated contingencies from "early demonstrative" use to "battlefield use" to theater-wide nuclear warfare. That capability should include range and yield options consistent with conducting strikes within the FRG, on militarily significant interdictory targets within the non-Soviet Warsaw Pact and within the Soviet homeland itself. The latter should not be viewed as a principal capability but rather as a complementary capability in the event of strategic nuclear exchange.

NON-ESCALATORY: To the extent that a nuclear weapon system can be "inherently nonescalatory," and perhaps a better description would be least escalatory, the image of the TNF should be "defensive in nature" and designed to counter aggression. Caution should be exercised to develop a force which presents clear evidence of a strong resolve and military capability without producing a perception of NATO offensive motives which might be perceived as a threat to Soviet national interests. In this regard, the force should emphasize defensive capabilities akin to those inherent to short-range nuclear artillery, both tube and missile launched.

MINIMIZED COLLATERAL EFFECTS: In consideration of Allied concern for collateral damage to the homeland, the force should be structured to minimize collateral effects and thus to minimize constraints on deployment in a tactical nuclear war. With the advent of advanced technology, such as enhanced radiation, systems can be designed and introduced into the TNF which will improve significantly this aspect of the TNF with no attendant reduction in war-fighting capability. Indeed, improved system capabilities will attend the introduction of the ER systems, thus upgrading the overall TNF capability in terms of weapon system effects and in terms of minimizing constraints on the employment of the TNF. Again, lower yield, highly accurate nuclear artillery is favored.

ADEQUACY OF FORCE: To enhance the deterrent value of the force, the TNF must be so structured that it is evident to the adversary that NATO possesses a nuclear force capable of conducting a successful nuclear defense of Western Europe, no matter who uses nuclear

weapons first or at what level, inclusive of theater-wide nuclear warfare.

There are many other military characteristics which could be considered, including specific system capabilities; however, the point to be made here is that, as a minimum, the above characteristics should be included in a TNF which is expected to successfully accomplish the missions of conflict deterrence, defense of Western Europe in the event of conflict, and the conduct of complementary strikes as part of the strategic exchange in the event of escalation.

In concluding discussion of deterrence and its implications for the TNF, it seems appropriate to extract from Alain Enthoven's discussion of the reasons for maintaining a nuclear force in Europe:

. . . while two-sided theater nuclear war makes no sense at all, one-sided nuclear war is even worse for the side that does not have nuclear weapons. We need a substantial nuclear posture in Europe to deter the other side from using nuclear weapons against us.⁵⁰

And while I do not personally indorse the view that the primary objective of the TNF is to deter Warsaw Pact use of nuclear weapons, I prefer deterrence of all aggression; it is irrefutable that, parity and detente notwithstanding, if deterrence is to succeed,

. . . the deterrent must be credible to the extent that an enemy can clearly perceive that the risks of an attack are out of proportion to his objectives and that NATO is prepared to escalate the conflict to a point which would imperil even the national existence of the aggressor.⁵¹

IV. NUCLEAR "FIRST-USE" BY NATO

Having considered, in a most cursory manner, whether TNF should be retained in Western Europe and the contribution of TNF to deterrence, one cannot escape the troublesome issue of the use of tactical nuclear weapons in a European war scenario. I have noted previously that it is essential to declare a doctrine of intent to employ nuclear weapons as an essential ingredient of an effective deterrent posture. But what is the US employment policy? History records many examples of differences between declared policy and actual strategy or intent! In an appearance before the 93d Congress, Secretary Schlesinger stated: "Given our doctrine of flexible response, we do not preclude the use of nuclear weapons by the United States and its Allies in order to prevent successful aggression."⁵² The President of the United States had so noted in mid 1975 when he publicly announced that the NCA would authorize the use of nuclear weapons when the consequences of conventional defeat appeared more detrimental to US national interests than the risks attendant to the employment of nuclear weapons.⁵³ My personal assessment is that the US must be dedicated to that view; that "intent to use nuclear weapons" is a necessary adjunct to successful deterrence. I do not believe that misrepresentation of our intent to defend Europe with nuclear weapons would be successful and failure would spell disaster for NATO solidarity and for deterrence.

Assuming US resolve to use nuclear weapons in the defense of NATO, two scenarios seem most probable. They are (1) to respond to

a Soviet first-use and (2) US first-use to defend against an overwhelmingly superior Warsaw Pact conventional attack. If one subscribes to the basic NATO doctrine, which is "to apply just the right amount of force to defeat the enemy decisively while holding the line as far forward as possible,"⁵⁴ the decision to respond to a Soviet first-use of nuclear weapons is an infinitely less difficult decision for the NCA than is the one which approves US/NATO first-use. And, in my judgment, it may be reasonably assumed that the use of nuclear weapons in sufficient number "to do the job" will be authorized to respond to Soviet first-use. On the other hand, the decision to use nuclear weapons first would be encumbered by uncertainty concerning whether the situation warranted crossing the nuclear threshold with its attendant risk of retaliation. Secretary Schlesinger held that the first-use of theater nuclear forces, even in very limited ways, was attended by very grave risks of escalation of the conflict and should be considered only when the consequences of conventional defeat outweighed those risks.⁵⁵ Alain Enthoven was even more adamant in expressing his view that "planned first use of nuclear weapons for the defense of Western Europe simply doesn't make sense. It amounts to saying, 'we'll have to destroy this continent in order to save it'."⁵⁶ Unfortunately, the issue of first-use is not that simple. While first-use is attended by grave risks, the disavowal of the first-use option, like formal decoupling of strategic and tactical nuclear weapons, carries with it ominous implications for NATO. The message conveyed to the Soviet would be that the US would be willing to

accept conventional defeat of the Allies in Western Europe! That is to say, conventionally superior forces of the Warsaw Pact would enjoy license to extend their military dominance in Europe so long as the nuclear threshold were not crossed. Obviously, such a position is inimical to US national interests and the objectives of the NATO Alliance. Therefore, it seems patently clear that the US/NATO must retain the option to use nuclear weapons first as an essential element of deterrence and as a credible war-fighting doctrine.

If the first-use option is retained, consideration must be given to the "when and how" of first-use. Secretary Schlesinger noted:

First use should be clearly limited and defensive in nature, so as to reduce the risks of escalation. However, the attack should be delivered with sufficient shock and decisiveness to forcibly change the perceptions of WP leaders and create a situation conducive to negotiations.⁵⁷

In the context of the Secretary's guidance on the "how" of first-use, the "when" might well be determined by the following guidance outlined in US Army doctrine which prescribes the purposes for which nuclear weapons may be requested:

- Halt attacks that cannot be contained by conventional means alone.
- Provide for survival of friendly forces.
- Preserve defensive capability.
- Retain control of key terrain.
- Prevent large segments of friendly population and resources from falling to the enemy.
- Launch operations to regain lost territory.⁵⁸

However, the "how" and the "when" above emphasize the military aspects of the use of tactical nuclear weapons. The first-use of nuclear weapons is a unique use and should be expected to be more

political than military in its objectives.

NATO first-use is intended to convey a message to the Warsaw Pact; a message of NATO resolve to meet the aggression with whatever level of violence necessary to deprive him of successful achievement of his tactical objectives and to cause him to recalculate the costs/risks and terminate the conflict. Military advantages which accrue to the tactical commander as a result of the first-use are ancillary to the political purpose. Therefore, the "how" and "when" of first-use by NATO ought to be planned to minimize the potential for retaliation/escalation and maximize the potential for conflict termination on terms advantageous to NATO. In that context, Carl Von Clausewitz noted:

If our opponent is to do our will, we must put him in a position more disadvantageous to him than the sacrifice which we demand of him. . . . Continuance of military activity must thus appear to him to lead to a less disadvantageous position.⁵⁹

We must consider first-use in terms of how best to minimize the probability of nuclear retaliation/escalation, how best to encourage conflict termination, and, finally, in terms of a doctrine which serves to deter conflict. Attendant considerations include likely Warsaw Pact response to NATO use of nuclear weapons, the alleged "inevitability of escalation," and the causes of the outbreak of hostilities in Europe. And, it seems to me, the first consideration ought to be "Why the Soviet/Warsaw Pact decided to initiate hostilities?" since likely Soviet responses to NATO first-use of nuclear weapons may be a function of the "why."

Among the probable causes for initiation of hostilities in Western Europe, I shall focus on two which are generally independent of the international political environment and evolve from a unilateral Soviet assessment of costs and risks. The first scenario considers that the Soviet have, for whatever reason, determined that their political/military objectives are worthy of the risk of nuclear war with NATO; the initiation of hostilities may be attended by a preemptive nuclear strike. The second scenario considers a miscalculation on the part of the Soviet planners concerning US/NATO resolve to use nuclear weapons against a Warsaw Pact conventional attack. In the first case, neither the "how" nor the "when" of NATO nuclear weapons employment is politically significant except as it leads to a military victory for NATO since the aggressor has predetermined that the objectives are worthy of all-out theater conflict. In the latter case, aggression resulted from a miscalculation of NATO resolve to use nuclear weapons and it would seem that the earlier the aggressor is dissuaded from this view and caused to recalculate the costs and risks, the more likely would be conflict termination without retaliation/escalation.

As to the likely response of the Soviet to a NATO first-use, one must answer the question of whether the Soviet response is a function of the "how" and "when" of NATO first-use. In the first scenario, I propose that the response is independent of the manner in which NATO employs its weapons. The Soviet may consider a response short of theater-wide escalation, if adequate to his tactical needs, although it would be inconsistent to expect less

than a militarily significant retaliation designed to achieve decisive tactical results. In the latter case, I believe that the Warsaw Pact response would be a function of the "how" and "when" of NATO first-use and could vary from "no nuclear response" to theater-wide escalation. Therefore, I shall direct the balance of my attention to the latter case response since the former case clearly demands that NATO defeat the aggressor in order to defend Western Europe owing to the aggressor predisposition to conquer at all costs.

Two basic approaches to the first-use of nuclear weapons are appropriate for consideration. They differ in the rapidity with which employment of nuclear weapons follows the outbreak of hostilities and the nature of their use. In each case, political considerations remain paramount and the primary objective remains conflict termination. The key issue separating the two approaches is whether the first-use should occur early in the battle, before the conventional forces are fully tested, or whether first-use should occur after decisive engagement when nuclear weapons must be used in order to defend successfully. Therefore, the issue is early forward-use when the option is ours or delayed-use when the tactical situation requires reliance on nuclear weapons for success, and it will be useful to compare the ability of each use to achieve the desired results of minimizing the probability of nuclear retaliation/escalation enhancing early conflict termination.

First, I would hypothesize that the use of nuclear weapons does not necessarily evoke nuclear retaliation/escalation and that the Soviet response may well be a function of how and where the

weapons are used and the level of violence inflicted upon them. My hypothesis obtains that there may be a spectrum of violence, albeit at the lowest level, that an adversary can absorb without being obligated to respond in kind if the potential for counter-response causes the cost to be disproportionate to the objective. I liken this situation to that of the smaller boy who accepts a "punch in the nose" without retaliating because his assailant, a much larger and stronger boy, would inflict even greater harm if he attempted to retaliate. So it may be in the scenario which presumed a miscalculation on the part of the Soviet concerning NATO resolve to use nuclear weapons. The cost/risk equation was solved in favor of the attack by conventional means and without a Soviet yearning for nuclear exchange. Certainly, in embarking on a conventional attack, the Soviet considered the use of nuclear weapons as the opening shot and decided it was not required or they did not desire to take this added risk. What then suggests that they must automatically discard their original position of nuclear nonuse? Possibly US/NATO first-use could evoke such a reaction; however, I propose that if the use were effected in such a manner that it fell within the spectrum of "tolerable use," the Soviet might be inclined toward reassessment and conflict termination rather than retaliation with its potential for conflict escalation. And I further hypothesize that the spectrum of "tolerable nuclear use" may be defined by the Soviet tactical situation, the degree of success achieved, the distance from the international border and the numbers of forces committed as well as the level of violence inflicted. Specifically, I would propose that

the further the Warsaw Pact advance from the border, the more success they enjoy, the greater the momentum of the attack, the more forces committed to the battle, the more difficult will be the task of separating forces/terminating the battle and the greater will be the magnitude of the violence which must be inflicted upon the attacking force to achieve a decisive tactical outcome. The synergistic effects of momentum, success, and absorption of a high level of violence in a local battle are likely to evoke retaliation, at least in kind, and the potential for conflict continuation rather than conflict termination. Thus, logic would support that an early, limited, well-conceived use of nuclear weapons in an apparently defensive role, directed against the attacking forces before they enjoy success, would enjoy the greatest potential for minimizing the probability of retaliation/escalation and for creating a situation conducive to a Soviet reassessment of the costs/risks and conflict termination.⁶⁰ Clearly, if conflict termination is the objective, first-use without nuclear retaliation should be the goal!

Having introduced my hypothesis concerning first-use without retaliation, it is interesting to compare "forward-use" and "delayed-use" in the context of a tangible set of political/military considerations.

Demonstration of Resolve: Forward-use of nuclear weapons conveys NATO unity of resolve and determination to defend Western Europe. It is a deliberate escalation in a situation where the option of nuclear nonuse is still available to NATO. Unlike

forward-use, delayed-use to "halt attacks that cannot be contained by conventional means alone" or to "provide for the survival of friendly forces" does not convey a message of deliberate/optional escalation. It is clearly military in nature and is intended to salvage a failing tactical situation by reinforcing conventional weakness. Unquestionably, the substance of the demonstration of NATO resolve is diminished in the latter case.

Civilian Casualties: Friendly casualties are minimized and population control is enhanced by the forward employment of nuclear weapons. Analysis of peacetime population distribution notes that the area nearest the border has a lower population density than the FRG average. In addition, evacuation of the population near the border may be feasible before or at the outset of hostilities. However, once hostilities begin and the traditional refugee control problems develop, the presence of large numbers of refugees may invalidate the city avoidance targeting techniques designed to preclude targeting the civilian population and may well serve as a major obstacle to be overcome by the nuclear planners in complying with political constraints deeper in the zone. Further, if evacuation is successful in the border regions, the absence of the civilian population will negate the value of the Soviet "city hugging" tactics. In summary, the further into the FRG the attacker advances, the more difficult will be the task of assuring population/city avoidance through preclusion-oriented targeting.

Other Collateral Damage: The logic which supports forward-use of nuclear weapons to minimize civilian casualties is equally applicable to a discussion of the minimization of other collateral damage. The further forward the weapons are used, the less area, population and towns/villages would be exposed to weapons effects. Further, Warsaw Pact retaliation against tactical forces would expose less of the population/area to weapon effects than would a similar tactical exchange at some greater depth from the border.

Force Required: The greater the depth of the Warsaw Pact incursion into the FRG, the greater the momentum of the attack, the greater is the number of forces committed to the battle, and the greater will be the force required to achieve a decisive tactical result. Forward-use might take the form of a traditional "spoiling attack" in which the intent is to disrupt the tactical maneuver at a critical point early in execution causing the maneuver to stall prior to the build-up of momentum or the achievement of initial success. The force required to accomplish a spoiling attack would be considerably less than that required for a "delayed-use" attack and is more likely to fall within that hypothetical spectrum of tolerable violence which does not demand retaliation in kind.

NATO Ability to Continue the Battle: Current Army doctrine is predicated on the view that nuclear weapons should not be used until the conventional forces have been fully tested and the tactical commander (Corps Commander) has determined that he cannot defend successfully by conventional means alone or that conventional

defense would be inordinately costly in terms of casualties. In either case, the doctrine then prescribes that the "Corps must predict the need and request a package 14 to 18 hours before the beginning of the timeframe for which it is needed."⁶¹ Should the Soviet choose to mass forces at a selected point along the battle line to achieve the combat force ratio necessary to effect a classical breakthrough, it becomes "iffy" whether the NATO forces would be capable of continuing the defense during the period before nuclear use is approved. If the crux of the issue is to delay nuclear weapons employment pending an absolute determination of the conventional inferiority of NATO forces or the "real" need to employ nuclear weapons to defend successfully, it would seem that such a determination could be made on the basis of opposing force postures and the circumstances under which hostilities are initiated (e.g., warning/preparation time) without the necessity to await conventional force failure. At the outbreak of hostilities, if the judgment is that the NATO forces cannot contain the aggressor, nuclear weapons should be employed forward in a spoiling attack before NATO forces are decisively engaged by a superior conventional force and suffer casualties at a rate which may preclude their continuing the defense after a successful nuclear strike. To be sure, if delayed-use follows a tactical situation in which the conventional forces of NATO are fully tested and tactical success cannot be achieved through conventional means alone, the probability that the NATO force would possess the ability to conduct a post-strike counterattack to exploit the effects nuclear strike is highly questionable. In the case of forward-use, the converse is true.

Conflict Termination: The objective of the NATO use of tactical nuclear weapons is to decisively alter the tactical situation in the favor of NATO and to create a situation which is conducive to early conflict termination on terms acceptable to NATO. In this regard, the preclusion of a major intrusion of the FRG by the Warsaw Pact through the forward-use of tactical nuclear weapons would facilitate post-conflict negotiations. Further, the proximity of an international border and the stalling of the attack prior to the commitment of the bulk of the Warsaw Pact forces would facilitate Pact rationalization of conflict termination.

Nuclear Planning: Current doctrine stresses the need for detailed planning for the use of nuclear weapons and the development of multi-weapon packages to support the tactical battle. Doctrine also stresses preclusion-oriented targeting and the minimization of collateral damage. It seems obvious that the longer the tactical battle is permitted to develop prior to the use of nuclear weapons, the more uncertain will be the specific tactical situation as it relates to assumptions incorporated in nuclear plans. The most valid planning assumptions seem to be those made with regard to the initial incursion into the FRG along the traditional avenues of approach; the likely employment areas for a forward-use scenario. Thus forward-use exploits detailed planning.

Political Acceptability: Clearly, the delayed-use of nuclear weapons enjoys greater political acceptability, save from the FRG point of view, than does forward-use. This stems in part from a

perception that delayed-use provides an assurance that nuclear weapons will not be used unless their need is absolute and that the interim between conflict initiation and the development of such a need provides time for attempts at negotiating a termination of the conflict. On the other hand, early or forward-use bears the stigma of a "tripwire" strategy which is automatic and inflexible in character and is, therefore, politically unacceptable. I would counter by noting, first, that it is unclear what gains will be achieved by delaying the use of nuclear weapons beyond the point where the Warsaw Pact intentions and capabilities are clear and the need for nuclear weapons to execute the NATO defense is perceived; and, second, that the forward-use need not be a "tripwire" strategy. I appreciate the concern of political leaders that absolute control must be exercised over the TNF and that the first-use must be political in nature. However, I also believe that the potential for conflict necessitates an assessment of NATO capabilities on a continuing basis and that the Nuclear Planning Group and the NCA must be prepared, on short notice, to respond to Warsaw Pact aggression with forward, first-use if the so-called "correlation of forces" continues to favor the Warsaw Pact aggressor.

Having compared the basic first-use concepts in terms of political/military considerations, it is my view that the forward-use of tactical nuclear weapons, targeted against the invading force in the form of a spoiling attack, employing weapons which do not challenge Soviet national survival, holds the greatest promise

for accomplishing the primary objective of nuclear first-use; that is the development of a tactical situation which leads to a Soviet reassessment of the situation and early conflict termination on terms acceptable to NATO. I am supported in my view by an earlier investigation of tactical nuclear weapons which noted:

If NATO waits, the enemy would be fully committed and would have established a momentum which would make disengagement, as a response to NATO nuclear counter-attack, difficult, even if he had the inclination to disengage.⁶²

I must add that my view of forward-use does not provide that all targeting take place in the FRG. Indeed, there are distinct political gains to be accrued from attacking shallow interdiction targets on non-Soviet Warsaw Pact (NSWP) territory. The inclusion or preclusion of a certain NSWP country from attack, based upon the level of support or participation in the Pact aggression, could serve as a source of divisiveness within the Pact and encourage nonsupport of the Soviet aggression; an appropriate political objective. Therefore, I conclude that NATO first-use ought to be forward-use which includes targeting a mix of military targets in an appropriate tactical zone extending on both sides of the international boundary so that the Warsaw Pact shares the burden of the conflict early-on with nuclear counter-attack retaining the appearance of constrained use.

In concluding my remarks on the first-use of nuclear weapons by NATO, it is appropriate to dwell for a moment on the type weapon systems I view as most appropriate and effective to execute this mission. Since first-use is primarily political and intended to

convey a message of resolve to the aggressor, by deliberate although constrained escalation to nuclear warfare, large-yield, long-range weapon systems which could be perceived as endangering the national survival of the Soviet Union, are not appropriate. Neither does the first-use require a capability to attack deep interdiction targets in non-Soviet Pact countries. In point of fact, the message of deliberate but constrained escalation as a demonstration of resolve is best conveyed by the shorter range, lower yield, cannon artillery projectiles complemented by the Lance surface-to-surface missile. The key player in the first-use scenario should be the nuclear cannon artillery which, by virtue of its inherent employment limitations, cannot be mistaken for other than a defensive weapon system and which, by virtue of its inherent flexibility and numbers, could attack a variety of tactical targets across the front in a single pulse. Further, its accuracy and warhead characteristics suit it to the attack of enemy forces within the FRG where collateral damage constraints are a critical concern. Tube-launched nuclear artillery projectiles meet all of the requirements of a first-use scenario and provide a credible war-fighting capability to support the conventional forces in follow-on nuclear use, if required.

V. LIMITED NUCLEAR WARFARE

The NATO military objective for employing nuclear weapons is "to change the tactical situation so dramatically that conventional forces can accomplish their mission."⁶³ However, the underlying theme of US/NATO nuclear weapons employment policy is to exercise

restraint and thus to control escalation. Forces are structured to accommodate the war-fighting mission, with proper emphasis directed to "restraint rather than on indiscriminate damage, and on the achievement of traditional military and political objectives, rather than on the destruction of an enemy's society."⁶⁴ These doctrinal statements clearly reflect the transition in US Army employment doctrine in 1973 from a doctrine of unconstrained use of nuclear weapons on the battlefield to achieve military victory to one of "constrained use" which seeks to terminate conflict at the lowest possible level of violence.⁶⁵ As defined in FM 101-31-1:

The ultimate objective of the employment of nuclear weapons is to terminate a conflict at the lowest level of hostilities on terms acceptable to the United States and its allies.⁶⁶

Since the national purpose of employment is to terminate a conflict, the employment of nuclear weapons should serve to demonstrate to enemy leaders that potential losses outweigh gains if a conflict is continued or escalated. To accomplish this end, nuclear weapons could be used to positively and dramatically alter the course of battle and preclude the enemy from achieving his objectives. . . . In all cases, follow-on strikes should support the basic purpose of decisively terminating a conflict at the lowest level of violence consistent with national and allied goals.⁶⁷

The US and NATO have entered a new era in nuclear warfare, one in which the emphasis is on the exercise of restraint and on the use of nuclear weapons to achieve political as well as military objectives.

The new doctrine emphasizes that the political aspects of the use of nuclear weapons are dominant and that absolute control of their use at the highest levels of the national authority (National

Command Authority--NCA) is essential. The tactical commander no longer enjoys the prerogative of employing tactical nuclear weapons. Doctrine holds that the potentially grave consequences of the use of nuclear weapons are such that the NCA will retain release authority and probably "will not approve the use of nuclear weapons until all lesser options are clearly perceived as inadequate to maintain the integrity of the U.S. and/or allied forces."⁶⁸ Indeed, doctrine holds that the NCA will approve all nuclear strikes, follow-on as well as first-use. Therefore, the use of tactical nuclear weapons becomes a political action, rather than a military maneuver, to achieve political objectives and conflict termination.

In the transition from unconstrained to constrained use of nuclear weapons on the battlefield, the conceptualization of "constrained use" took several forms. The first of these was clearly in evidence above. The NCA will withhold unto itself the right to approve the use of nuclear weapons thereby assuring their use only when and how it should be deemed politically appropriate to enhance accomplishment of the political objectives. Secondly, from the standpoint of employment, specific constraints will be tied to each use of nuclear weapons. These constraints may take the form of limits on area, type targets to be attacked or to be avoided, time of attack, yields, delivery systems to be employed, and such other physical constraints as may be deemed appropriate by authorities in the request/release chain. Therefore, while it is necessary to plan for the possible use of nuclear weapons, the commander must remain aware that uncertainty exists concerning

whether NCA approval will be forthcoming and "when they will be committed or whether they will be employed exactly as planned."⁶⁹ That latter consideration becomes an additional constraint. The commander must integrate the nuclear plan into the conventional scheme of maneuver and, therefore, he must be able to plan within specific limits for their use. Otherwise, use may be precluded by the disposition of forces and the tactical situation. All in all, constraints on the use of tactical nuclear weapons will increase the difficulties attendant to planning, employment and the maximization of the effects of nuclear weapons on the battlefield.

If, as it would seem, the doctrine of "constrained use" discourages employment of tactical nuclear weapons by compounding the difficulties attendant to their use, what then is the purpose? Responding to a US/NATO need to employ nuclear weapons, the NCA "will authorize the use of nuclear weapons when the advantages of doing so outweigh the advantages of not doing so,"⁷⁰ and authorization to employ will be granted with the intent that they shall be used in the least escalatory way to turn the tide of battle in favor of the West and to demonstrate to the adversary NATO's resolve to defend with whatever force is required. The overall objective is to cause the Warsaw Pact to terminate hostilities and withdraw. Wynfred Joshua best summarizes the nonescalatory view of nuclear weapons employment in a constrained-use mode in the following way:

In response, the Soviet Union could, of course, consider escalation. But in the view of the demonstrated resolve of the Western Allies to use nuclear

weapons, the USSR would have to contemplate that, by escalating, it would place its own homeland at risk to a nuclear strike. Unless the USSR had determined to complete the conquest of Europe, regardless of the consequences, the militarily meaningful use of tactical nuclear weapons by the allies should induce the Soviet Union to halt its aggression and withdraw.⁷¹

Those espousing a nonescalatory view theorize that the imposition of clearly perceived constraints on the employment of tactical nuclear weapons will enhance escalation avoidance. However, enemy perception of NATO constraint is key to escalation control only if Soviet response is, indeed, a function of the "how" of NATO use. Therefore, one ought to evaluate the logic of basing an employment doctrine on enemy perceptions of NATO use of nuclear weapons and on the basis that Soviet response is a function of how NATO uses them.

To assess whether Soviet response to NATO use of nuclear weapons is a function of how NATO uses its weapons, one must first address the case that the Soviet has decided to take Europe at any cost. In that case, it is fair to assume, as in first-use discussions, that the Soviet response would be independent of the "how" of NATO use. The Soviet would respond with whatever force is required to assure the continued success of their offensive. They are equipped to do so. In fact, Soviet doctrine suggests they might initiate such an attack with nuclear strikes. If they are not so inclined at the outset, the nonescalatory view holds merit, particularly if one does not accept Soviet doctrinal pronouncements which deny the existence of a "strategy of graduated nuclear response."⁷² On the one hand, such pronouncements may be intended

to deter NATO first-use under threats of theater-wide retaliation rather than to represent actual Soviet intent. But, one must consider, as was noted earlier, that Soviet weaponry and employment techniques are seemingly incompatible with a doctrine of selective or constrained use. They emphasize higher yields, less accuracy, and target area saturation. To be sure, collateral damage does not appear as a major concern! Therefore, there is evidence and logic to support or refute the nonescalatory view. In the absence of an initial Soviet preemptive nuclear strike, preceding or coincidental with the outbreak of hostilities, it is my view that Soviet response to NATO nuclear use may well be determined by the manner in which NATO employs its weapons and consideration of such a possibility is appropriate as part of the planning sequence.

Addressing the logic of basing an employment doctrine on the perceptions of the enemy, one must consider the probability that the desired message can be conveyed in time of crisis and that the adversary will be in a position to respond in the manner desired. Is it reasonable to assume that the adversary will recognize our actions, as intended, in the hour of crisis? A strong argument can be made that misunderstanding of actions and intents is commonplace in daily life and therefore would be more likely to occur in the hour of crisis.⁷³ Surely, the best hope, and perhaps the only hope, is that he will perceive general constraint, that is nuclear use short of theater-wide war, limited in geography and time, and that this perception, complemented by the recognition of the potential for mutual destruction in Europe through escalation, would

be sufficient to cause him to act with similar restraint, if not to terminate hostilities outright. On the other hand, one could logically challenge that the Soviet could accept an outcome which would promise less than total victory. A view worthy of consideration proposes that the US could:

. . . accept even total defeat of U.S.-NATO forces in Central Europe and the most grave international consequences thereof with her innermost sense of vitality and national integrity still intact (albeit severely shaken). The USSR, however, could accept neither minimum nor substantial losses in Central Europe without clearly acting in absolute, swift and decisive defense of national being.⁷⁴

The Soviets' keen sense of the history of repeated Western European attempts to dominate the Soviet homeland supports this view. Security of the homeland and hegemony in Europe are the dominant Soviet national interests. In this mindset, it is questionable whether the Soviet could accept any course of action which might diminish their hegemonic influence in Eastern Europe or be perceived as a threat to the security of the homeland. It is my view that the likelihood of conveying the desired message and evoking the desired response will be, at best, "iffy" and, as in first-use, will decrease in probability of success as the Soviet becomes more deeply involved in the battle and more committed to the achievement of a military victory. In that context, "constrained use" enjoys its greatest credibility as a first-use employment technique rather than as an overall doctrine.

Unquestionably, the doctrine of "constrained use" of tactical nuclear weapons was developed to provide a credible doctrine for the

employment of nuclear weapons in the defense of Western Europe as a necessary adjunct to deterrence. Further, it would provide a doctrine for employing nuclear weapons to demonstrate resolve and achieve military objectives in the least escalatory manner, consistent with escalation control and conflict termination. But, at what cost? While the underlying theme of "constrained use" is admirable, what of the techniques for implementing this doctrine? One might argue that the controls imposed on the employment of tactical nuclear weapons have, in fact, reduced the doctrine of "constrained use" to a doctrine of nonuse! That is not to imply that constrained use need necessarily preclude the effective and efficient use of the TNF to support the conventional battle. However, it is my view that the techniques developed to implement the "constrained use" doctrine, the weapons employment doctrine, have severely limited the capability of the TNF to provide timely, responsive nuclear fire support to the tactical commander in the event of nuclear conflict. It is, therefore, to the military aspects of the constrained use doctrine that I now address myself.

At the outset, it is noteworthy that the success of the doctrine hinges on a cooperative effort by NATO and the Warsaw Pact to limit escalation. "Each of the adversaries forces the hand of the other, and a reciprocal action results which theoretically can have no limit."⁷⁵ Clearly, both sides to the conflict must demonstrate an interest in limiting escalation or escalation control will not occur! The voluntary, unilateral imposition of constraints by NATO would be a "fool's game" in which the Warsaw

Pact, with its apparent conventional superiority and geographical advantage, could readily turn the tide-of-battle to its advantage, by maximizing the effects of its own TNF, and emerge the victor. The point worth noting is that early compliance with the doctrine of "constrained use" presents potential for military/political advantage but continued unilateral compliance in the face of a perceived Warsaw Pact lack of cooperative effort could spell military disaster. Therefore, US doctrine must provide for rapid transition to deliberate escalation and general, theater-wide release as well as for "constrained use." Not only must the doctrine so provide but NATO planners and forces must be so trained. I do not perceive this to be the case! Based on my recent observations in Europe, a prevailing opinion among US officers was that release of nuclear weapons for first-use or any use was unlikely, irrespective of the tactical situation. It implies NATO lack of preparedness for deliberate escalation/general release and challenges the credibility of the doctrine and its deterrent value as well as the readiness of the forces to execute a variety of nuclear options.

What has created the "spectre" of an unworkable or "non-use" doctrine among US planners in NATO? There are several contributing factors of which two are worthy of addressing herein. They are (1) the request/release procedures, and (2) guidelines for tactical justification to use nuclear weapons.

Since it is my intent to address request/release procedures at some length in later discussion, I will simply note that US and NATO

nuclear planners share a common concern that NATO consultative processes and US release procedures will cause release to come too late.

The guidelines for justification to use nuclear weapons, as noted in the earlier discussion of first-use, are decidedly defensive in nature! The nuclear weapons employment doctrine emphasizes their use to reinforce conventional weakness or failure and it is my view that this "negative" approach does little to generate confidence in the use of those weapons, implying nuclear weapons are a last resort measure, if you will. It suggests, erroneously, that:

- use of nuclear weapons from a position of advantage should not be considered as a valid technique of employment;

- when the tactical commander gets in trouble, nuclear weapons can "bail him out."

Clearly, an employment doctrine which does not provide for early, forward, offensive use of nuclear weapons from a position of advantage denies the tactical commander many of the advantages which accrue from the possession of a tactical nuclear arsenal. Further, such a doctrine invites exploitation of NATO conventional weakness by a conventionally superior adversary. To be sure, such a doctrine prohibits a tactical commander from maximizing the effectiveness of his nuclear arsenal in support of his maneuver plan. US doctrine meets all of these criteria as it calls for delaying the use of nuclear weapons until it is perceived that the battle cannot

be won by conventional means alone. Unfortunately, it does not guarantee that release authority will be timely when the need arises! Indeed, according to current doctrine, release is based upon the perceptions of the NCA, whose view of the tactical need may be decidedly different than that of the commander in the field. Therefore, the commander in the field must plan his maneuver without depending on the availability of nuclear weapons and, for all intents and purposes, must proceed as if there were none. Such a doctrine hardly generates a sense of confidence and enthusiasm among field commanders and planners concerning nuclear fire support and conduct of conventional-nuclear operations.

Having addressed in some detail, and challenged in part, the doctrine of "constrained-use" in a tactical nuclear war in Europe, it seems appropriate to address the feasibility of tactical nuclear warfare and how employment doctrine prescribe that we fight a tactical nuclear war. And, since the question of the feasibility of tactical nuclear warfare is the least difficult to address in the "real world" environment, I shall address it first.

There are as many views of the feasibility of tactical nuclear war as there are personal notions on the subject. Academicians, philosophers, sociologists, analysts and generals have debated the issues at great length, and there are as many who would support its feasibility as there are those who would condemn it. However, the issue of the feasibility of tactical nuclear warfare may be academic in the context of the "real world" issue of whether the choice is ours to make! Quoting Dr. Henry Kissinger in the December 1975 issue

of NATO Review:

. . . the choice between conventional and nuclear defense is not entirely the West's to make. Thus it is extremely dangerous to reject the notion of tactical nuclear defense. . . .⁷⁶

Even if the US/NATO view tactical nuclear warfare as risky and undesirable, can NATO afford not to be prepared to fight such a war? I suggest NATO cannot afford such a luxury. NATO's best interests continue to be served by the maintenance of a credible capability to conduct tactical nuclear warfare and by the demonstration of resolve to execute a nuclear defense, if required. In my view, such a posture serves to deter aggression, conventional and nuclear, and its absence would encourage aggression and increase the probability of nuclear war. Soviet perception of a lack of NATO nuclear readiness or a perception that Western inhibitions concerning nuclear warfare would preclude NATO's use of such weapons could result in NATO being confronted with a Warsaw Pact conventional-nuclear attack or an overwhelming Pact conventional attack, forcing NATO to fight the very war it sought to avoid. Soviet doctrine espouses tactical nuclear warfare; NATO must counter with a credible tactical nuclear defense.

If NATO must maintain a credible tactical nuclear war-fighting capability, how shall NATO fight a tactical nuclear war? The specific techniques for conducting limited or tactical nuclear warfare are based on the following fundamental concepts:

-- Employment of nuclear weapons must be selective and restrained in an effort to control escalation.

-- Nuclear weapons will be employed in support of the conventional maneuver scheme in a fire support role; conduct of conventional-nuclear operations.

-- Commanders must plan to conduct operations in a manner that is not dependent upon the use of nuclear weapons.

-- Use of nuclear weapons will be authorized within specified constraints designed to insure compatibility between political and military objectives.⁷⁷

-- To accommodate the application of constraints to the use of nuclear weapons, extensive pre-planning of the use of nuclear weapons and the employment of weapons in "packages" is emphasized; each package will be designed to accomplish a specific tactical objective.

-- The nuclear war will be fought by the Corps Commander who will plan corps packages designed to decisively terminate the battle and will employ those packages, upon receipt of release authority, "to defeat the total tactical threat facing the corps. . . ."⁷⁸

-- The authority to approve all uses of nuclear weapons will be retained by the NCA.

Recalling the doctrinal justification for the use of nuclear weapons, tactical nuclear weapons employment doctrine appears contradictory and inadequate. The following are some of the incongruities in current doctrine as I perceive them:

-- Commanders are told to conduct detailed planning for the use of nuclear weapons, to develop pre-planned packages ("a discrete

grouping of nuclear weapons by specific yields for employment in a specified area during a short time period to support a corps tactical mission"),⁷⁹ and then to plan to conduct operations in a manner which is not dependent upon the execution of those plans. That is to say that the commander must operate as if there were no nuclear weapons with which to fight the battle!

-- Doctrine directs that nuclear weapons be employed selectively and with restraint. Yet doctrine similarly notes that "the number of weapons in a corps package will usually be 100 to 200 depending on the threat, the mission, the terrain, and population characteristics."⁸⁰ The employment of a hundred or more weapons in a short pulse hardly augurs a Warsaw Pact perception of NATO restraint except in the very broadest sense that the strike is something less than theater-wide war or strategic exchange.

-- Doctrine prescribing the simultaneous use of large numbers of nuclear weapons in a single strike (100-200 in a package) does not accommodate the possibility of prolonged tactical nuclear war. The outcome of such a conflict may well be determined by the depletion of tactical nuclear stockpiles; the conflict will be fought with the stockpiles available at the outbreak of hostilities since the rate of production of nuclear warheads cannot be increased as readily as in the case of conventional munitions.

-- Doctrine emphasizes selectivity and restraint in the employment of nuclear weapons but notes that employment should be designed to defeat the total tactical threat facing the corps. The inference drawn from "total defeat" is hardly one of restraint.

Rather, one draws the inference that the nuclear weapons are expected to totally defeat the force threat, an objective uncommon to other types of combat support capabilities and probably not achievable in any case. History abounds in examples of the turning of the tide of battle with a force much less than that required to decisively terminate the battle by "defeating the total threat." Emphasis on the doctrinal view that "selective, individual targeting of a few weapons or a single weapon may have strategic utility, but will have little tactical impact,"⁸¹ seems to be the underlying basis for this apparent incongruity. Perhaps a lesser use than area saturation or total defeat would achieve the desired military result.

-- Nuclear weapons will be employed only when it is clearly perceived that the mission cannot be accomplished by conventional means alone and the use will be in support of the conduct of combined conventional-nuclear operations; however, the approval to use nuclear weapons must come from the NCA. NCA retention of absolute authority to approve the use of nuclear weapons after first-use portends difficulty for the field commander in obtaining release authority in a manner which will be responsive to his needs in conducting the land battle. Even though it may not be the intent, the field commander may find himself fighting a conventional war at signal disadvantage due to the lack of responsiveness of the request/release process.

-- In conducting the land battle, the doctrine notes that the "conventional battle must be conducted and the use of nuclear weapons timed and located so that the dramatic change they produce

is advantageous to US forces."⁸² The present doctrine denies the field commanders the prerogative to authorize use of nuclear weapons and to select the location and timing of their use!

-- Unlike any other war-fighting doctrine, little heed or emphasis is directed to the exploitation of military advantage accrued from the use of nuclear weapons. Indeed, since use is generally predicated on a condition that the mission cannot be accomplished by conventional means alone, one may doubt whether the conventional force would possess the capability to exploit the tactical advantage!

It is my conclusion that current doctrine for the employment of nuclear weapons in a tactical nuclear war discourages serious consideration of their use by field commanders. Doctrine directs non-reliance on nuclear weapons use and denies the tactical commander the flexibility and prerogatives required to fight the battle. The doctrine enjoys the potential of being nonresponsive, lacking in credibility, nonspecific concerning "follow-on use" (the crux of tactical nuclear warfare), and has evolved into a doctrine of nonuse!

Among the "fixes" I would proposed, to achieve a more credible doctrine for employing nuclear weapons in conventional-nuclear operations, are the following:

-- Increased emphasis on the positive aspects of nuclear weapons employment including its use in the offense.

-- Increased emphasis on the exploitation of nuclear use, especially the defensive or pre-emptive use of nuclear weapons, by rapid, follow-on offensive/counter-offensive operations.

-- De-emphasize the need for "total defeat" of the threat by nuclear means.

-- Address tactical nuclear weapons as a means of "fire support," albeit more powerful than any previously available to the commander, and not as a unique, awesome and mystic weapon whose use is unthinkable.

-- Increase the responsiveness of the request/release procedures.

-- Upgrade the training of NATO forces in the art of conducting operations in a nuclear environment stressing the capabilities and limitations of nuclear weapons, the finiteness of their potential, protective measures to be taken to enhance survival in a nuclear environment and exploitation of friendly nuclear attacks.

Implementation of these fixes would remove many of the existing barriers to the serious consideration of the use of nuclear weapons in the land battle and would enhance the credibility of US/NATO employment doctrine. Employment doctrine must be realistic and must provide for the timely employment of nuclear weapons to support the conventional maneuver scheme or there is only a doctrine of nonuse!

VI. NUCLEAR REQUEST AND RELEASE PROCEDURES

If there is a signal concern I harbor with regard to NATO's nuclear posture, it is the inadequacy of existing nuclear request/release procedures as I perceive them. My personal exposure to these procedures, both academically and as they were presented to me

by planners and executors in Europe, left me with the distinct perception that the procedures were excessively complex, redundant and unresponsive. It was also apparent to me that much of the problem resulted from a bureaucratic penchant for detailed targeting information which exceeds the needs of the decisionmakers. Therefore, it is my purpose to highlight system inadequacies as I perceive them.

Let me note, at the outset, that I do not challenge the need nor the desire of the NCA to retain absolute release authority for the first-use of nuclear weapons. The political implications of crossing the nuclear threshold, and the risks attendant thereto, are clearly of such a nature that they can only be evaluated at the national leadership level. I enthusiastically support the view that such a decision should be made by the President of the United States, in consultation with the NATO Allies. However, I do not agree that the decision should be withheld until it is perceived that the conventional defense will fail without nuclear fire support or, as was noted in early doctrinal guidance, until "the conventional defenses have been severely tested and found to be inadequate."⁸³ Nuclear release under those circumstances may not be timely, especially when viewed in the context of an already failing conventional defense and Warsaw Pact doctrine which calls for the rapid massing of forces to effect breakthrough and attacking force rates of advance of 50 kilometers a day early in the conflict. Indeed, it is not clear that the perception of the need will occur sufficiently early to justify a nuclear request, according to

doctrinal guidelines, and to insure the timely release of the needed nuclear weapons before the "lines break." In the view of at least one ally, General J. A. Graf Kielmansegg, Retired, of the Army of the Federal Republic of Germany:

Taking into consideration the complicated and very time-consuming request release process, it is highly probable that selective use will come too late and that the aggressor will not be stopped effectively nor will exploitation of its effect be made possible.⁸⁴

And, it is noteworthy that this view addresses a potential lack of timeliness without regard to system failures, considering only the mechanics of requesting release authority via a fully operational system.

What if the mechanical means by which the request for release is to be forwarded fail to function? This is not a hollow concern expressed to support an argument; it is a real concern in day-to-day operations and assumes more ominous implications in a nuclear environment due to its unique characteristics. Let me cite a single historical example of the implications of worldwide communications failure:

Drastic shortcomings in the Defense Departments worldwide communications came to the attention of a congressional subcommittee after the Israeli attack in 1967 on the American ship "Liberty." . . . the Joint Chiefs of Staff decided to order the "Liberty" into safer waters. Over a period of thirteen hours prior to the Israel attack, they sent their order in at least four messages. . . . This failure in emergency communications occurred under almost perfect conditions: no facilities had been disabled, there was no enemy jamming, and no restrictions on the use of available communications modes had been imposed.⁸⁵

Such "real-world" conditions hardly augur well for a plan which calls

for waiting until the situation is dire to initiate a nuclear request. And, since the need/lack-of-need for nuclear weapons to successfully defend Western Europe becomes clearly evident at the outbreak of hostilities, a function of comparative force posture and warning time, delaying the "nuclear decision" is unnecessarily risky. Therefore, although I do not indorse an automatic or "trip-wire" response, I do indorse NCA involvement in a continuous assessment of the force balance in the mindset that execution of an early, forward nuclear "spoiling attack" may be required to defend Western Europe. I perceive no advantage in delaying the "inevitable" and I perceive a high probability that release will be too late if the decision-making process occurs only after the forces are severely tested and the defense is failing.

With regard to the control of follow-on strikes in support of a tactical nuclear war, I am less supportive of current doctrine. It is my view that the retention of absolute release authority by the NCA is unnecessary and inhibits the conduct of the conventional-nuclear operations. For the reasons cited above, compounded in time of hostilities, current release procedures would be unresponsive to the needs of the field commander and would render nuclear weapons ineffective as a means of supporting the maneuver scheme. This is an unacceptable condition. If first-use fails to terminate the conflict, nuclear weapons must revert to a primary war-fighting role to force conflict termination.

It is my judgment that the NCA should exert an influence on the follow-on use of nuclear weapons. However, it is difficult for me

to visualize that the President of the United States should concern himself, in the heat of an international nuclear conflict, with whether the US V Corps should fire a particular nuclear strike at a certain time and with what weapons and against what targets. I can visualize that the NCA may find it appropriate to provide "mission guidance" specifying constraints on nuclear weapons use which could be modified as the political and military situation dictated. Such mission guidance might include geographic and population avoidance constraints on allied soil, exclusion of selected non-Soviet Pact countries from attack, exclusion of the Soviet homeland from attack, general limits on yields and/or types of weapons to be used for selected "type" missions, exclusion of certain type targets or restriction of nuclear weapons use to the battle area and purely military targets. In addition, the NCA might find it advantageous to direct certain strikes against particular targets to achieve a given political end. However, I view that NCA interest should be limited to general guidelines with regard to tactical use within the battle area and the NCA should not concern itself with specific tactical strike decisions which would tend to limit the flexibility of the field commander. Therefore, I propose that a more appropriate solution to the need to exert political control over the tactical use of nuclear weapons is to delegate to the Supreme Allied Commander, Europe the authority to expend nuclear weapons subject to compliance with specific mission guidance. By so doing, the potential for communications failures are significantly reduced, the responsiveness of the system is enhanced, and the commander's ability to

apply nuclear weapons to support the battle in a manner which maximizes their effects becomes a reality with negligible loss of control by the NCA.

Finally, I would note that the processing of nuclear release requests must be accomplished in such a manner that it does not create a unique signature which is detectable by the Soviet. Further, it must not require prolonged processing times such that detection of intent could be exploited in real time. The criticality of denying the Soviet knowledge of NATO intent to use nuclear weapons is based on his declared doctrine to execute preemptive strikes in the event such intent becomes evident. Clearly, the request/release process must be designed to deny the enemy knowledge of intent and must be sufficiently responsive to insure that Soviet access to NATO intent will not be attended by opportunity for exploitation. Signature such as unique preparatory activity by NATO forces, increased communication, and interruption of normal aircraft activity are to be avoided as long as possible prior to a strike. Similarly, the proposed leadtime for initiating a request to employ a nuclear package, 14 to 18 hours before the beginning of the timeframe in which the strike is desired, must be lessened. In essence, improving timeliness and reducing the complexity of the request/release process decreases the probability of Soviet detection of NATO intent and enhances the effectiveness of the tactical use of nuclear weapons.

It is appropriate to conclude this discussion of nuclear request/release procedures by quoting General Andrew J. Goodpaster,

past SACEUR: "Streamlining of procedures to improve timeliness and effectiveness of use without impairment of essential control should be pressed."⁸⁶

VII. THEATER NUCLEAR FORCE POSTURE

In comparing the current posture of opposing nuclear forces in the European theater, I noted early in this essay that apparent deficiencies in the NATO TNF included outdated technology and questionable survivability. And, while I alluded to force adequacy in terms of numbers, I did not address force compatibility with current doctrine. It is to that key issue, as well as to the others, that I now address my attention. For, clearly, if we are to have a credible deterrent, which requires a credible war-fighting capability, NATO must have a TNF which is compatible with the execution of its doctrine.

Having discussed at some length the current doctrine for employing the TNF in a tactical nuclear war, it would serve well to consider the preferred employment options of the principal NATO Allies as a precursor of preferred TNF force structuring. They hold four requirements to be essential to the employment of the TNF.⁸⁷ They are:

- Early resort to tactical nuclear weapons to counter massive conventional attack.

- Nuclear weapons should not be used for purely political or psychological reasons without striking at meaningful military targets; they oppose demonstration use.

-- An in-theater capability to strike non-Soviet Warsaw Pact territory and, if necessary, the Soviet Union itself.

-- Nuclear weapons should be used in such a way as to minimize collateral damage.

Considering those preferences in the context of current doctrine, a force structure is required which is somewhat different than that which currently exists. And, given that the current force structure is a product of an era of "massive retaliation" and less advanced technology, it is not surprising that restructuring seems appropriate. In addition, the continued modernization of the Soviet tactical nuclear arsenal demands NATO force modernization since theater nuclear weapons are to remain an essential element of NATO deterrent posture.⁸⁸ Therefore, the question is not "whether" but "how" the TNF should be restructured!

In describing a general TNF posture which would serve NATO best, by meeting the tactical war-fighting requirements of the TNF and by satisfying the preferences of the Allies upon whose soil the war is likely to be fought, one analyst noted that:

NATO's theater force should be postured so that Russian planners are assured that NATO is capable of responding to a first or subsequent use of nuclear weapons in such a manner that they would be forced to choose between a negotiated withdrawal or escalation to a strategic nuclear exchange. Confronted by such forces, Soviet planners who might miscalculate NATO's capability for conventional defense could not ignore the prospect of conventional conflict escalating to the nuclear level.⁸⁹

It is my view that the TNF must be a force which possesses the military capability to conduct a nuclear defense in a "constrained

use" manner, and the capability to escalate to the level of violence set by the aggressor. It must also be survivable; that is to say, it must be able to survive a deliberate Soviet first-strike with sufficient TNF intact to conduct retaliatory strikes with sufficient force to cause the costs/risks to outweigh the objectives. And, this survivability must be clearly perceived by the Soviet. Finally, the force must possess those basic characteristics which will satisfy Allied preferences in terms of military capabilities and the limiting of collateral effects. Summing, the force must be survivable, contain a broad spectrum of weapon and yield capabilities, emphasize lower yields and more accurate systems, and incorporate the state-of-the-art in nuclear warhead and guidance technology.

The three seemingly overriding considerations of force structure and doctrine, survivability--escalation control--collateral damage, favor a force which is primarily composed of dual-capable cannon artillery and short-range, improved SSMs. It is hard to imagine a battlefield use for larger yield warheads (e.g., 100 KT) in a tactical nuclear war fought under the guidelines of current doctrine on West European soil.

Artillery's favored position as that nuclear delivery system which best meets NATO's tactical needs was reaffirmed by Secretary Schlesinger:

Artillery's high accuracy, low yield, rapid responsiveness and ease of control by local commanders should provide for effective attacks against targets in proximity to friendly troops /tactical use/. Because of its (inherent limitations in range, etc.) . . . use of nuclear artillery in limited nuclear conflict probably has less chance of resulting in

escalation to theater-wide nuclear war than longer range SSMS or tactical aircraft.⁹⁰

Lending credence to that view is the inherent survivability of artillery. A survey of artillery damage in past wars would clearly indicate that artillery tubes are inherently hard and their existence in large numbers throughout the battle area makes it virtually impossible for an adversary to disarm the nuclear capability. Indeed, every battery becomes a nuclear delivery unit capable of launching a tactical nuclear strike with impressive responsiveness if nuclear projectiles are available. Therefore, it is logical to conclude that the mainstay of our TNF force ought to be cannon artillery. And, since the primary fire support artillery of the NATO Allies is the 155mm Howitzer, it would seem appropriate that the nuclear artillery force include both an Improved 8-inch nuclear projectile, with its longer range capability, and an Improved 155mm nuclear projectile, with its greater battlefield density, in adequate numbers to assure dispersion throughout the battlefield. Every artillery battery ought to have the capability of responding to a nuclear mission. Such force modernization would be consistent with General Goodpaster's observation that:

Improved small-yield weapons should be developed. The 8-in. and 155mm weapons are of particular importance. Greater accuracy, reduced collateral effects, greater field-readiness are among the characteristics to be pursued.⁹¹

Combining a strong force of improved nuclear artillery with a complementary force of Lance SSMS, a nuclear capable SAM force, a reduced number of nuclear capable aircraft for deep-interdiction and

support of general strike plans/strategic exchange, and an appropriate slice of the SSBN force for similar roles would seem to be the best force posture. Such an artillery heavy force would convey military capability, would evoke a clear perception of being uniquely and unquestionably targeted to the defense of Western Europe due to the inherent limitations of an artillery heavy force, and would enhance deterrence and escalation control. Further, employment of the TNF in Western Europe would be more palatable to the Allies in light of the collateral damage limiting characteristics of the force. Therefore, it is my view that an artillery heavy force, which is not as vulnerable as the current TNF to limitations in mobility and dependence on weather/airfields and which is not as escalatory in nature, best serves NATO's needs for the maintenance of a credible deterrent posture.

VIII. CONCLUSIONS

This survey of the NATO TNF posture and the doctrine for employing tactical nuclear weapons in-theater was intended to be both objective and constructively critical. In achieving my intended goal, I arrived at selected personal conclusions critical of the existing force posture and employment doctrine. Those critical conclusions appeared in their proper place within the essay and are restated here for your reconsideration:

-- The maintenance of a credible capability to conduct tactical nuclear warfare in the defense of Western Europe is an essential element of an effective deterrent posture.

-- The current doctrine for the employment of tactical nuclear weapons in a first-use role in Europe is not consistent with the NATO purpose for conducting a nuclear strike; that is the termination of the conflict at the lowest level of violence possible.

-- The doctrine for the employment of tactical nuclear weapons in a second-strike or follow-on role does not provide the responsiveness, flexibility and opportunity to maximize the effects of nuclear weapons required by the field commander to effectively employ nuclear weapons in support of the maneuver scheme. Neither does it provide adequately for the use of nuclear weapons in the offense or for exploitation of friendly nuclear strikes. The doctrine seemingly discourages use from a position of advantage.

-- The employment of nuclear weapons in large packages (100-200 weapons) does not consider the possibility of prolonged conflict.

-- Employment doctrine and attendant request/release procedures fail to discriminate between first-use and follow-on use in terms of the requirement for absolute control and thus fail to recognize the primary "war-fighting" role of follow-on use as compared to the primary political role of the first-use.

-- Request/release procedures are cumbersome, redundant and likely to be less responsive than required to assure the integrity of the NATO forces. In addition, they impose unnecessary vulnerability to detection and preemptive strike.

-- The current TNF posture is not consistent with the doctrine of constrained-use, does not incorporate the state-of-the-art in technology, enjoys questionable survivability and requires overall

restructuring to reduce reliance upon more vulnerable and escalatory systems.

In the light of those conclusions, I propose that the TNF be restructured to an artillery heavy force, incorporating the state-of-the-art in warhead and collateral damage limiting technology. Further, I propose that the restructuring and upgrading of the TNF be accompanied by efforts to expedite request/release procedures and redefine the doctrine for first-use and follow-on use consistent with the goals of NATO and the needs of the tactical commander in fighting the land battle. Such actions would, in my view, improve the overall credibility of US/NATO nuclear doctrine with Allies and adversary alike, enhance deterrence, and assure the existence of a NATO tactical nuclear war-fighting capability, should the need for such a force arise.

In concluding this survey of tactical nuclear warfare in Europe, I wish to state my unswerving conviction that NATO's foremost mission must remain to deter nuclear war at all reasonable costs. NATO must maintain a complimentary conventional and nuclear force which clearly projects an image of readiness, capability and resolve to defend Western Europe at whatever level of violence is required. It is in projecting that image that the greatest hope of deterring conflict in Europe resides. And, in my view, achieving deterrence of conflict by honorable means is a greater accomplishment than winning the war which results from a failure to deter hostilities.

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